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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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David W. Burns

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EXAMINER

LIANG, REGINA

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/710,854	Applicant(s) BURNS, DAVID W.	
	Examiner Regina Liang	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/15/09.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-23, 25-32 and 34-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-23, 25-32 and 34-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 2/15/09 has been entered. Claims 1-13, 15-23, 25-32, 34-40 are currently pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

3. Claim 32 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 32 depends from claim 31 but claim 32 fails to further limit the subject matter of claim 31.

Claim Rejections - 35 USC § 103

4. Claims 1, 2, 4, 6, 11-13, 15, 16, 18, 20, 21, 23, 26, 27, 29-32, 35, 36, 38, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa (US 6,100,538) in view of Omura (US 6,594,023) and Hiramatsu (US 6,339,748).

As to claims 1, 31, 32, Figs. 1, 2 and 22 of Ogawa discloses a system for determining a stylus position of a stylus (2), comprising: a telemetric imager (detecting units 3L, 3R, Fig. 1) having an optical imaging array (image sensors 13, Fig. 2); a controllable light source positioned near the telemetric imager to illuminate a stylus tip (Fig 22, the light source 31 is positioned near the detecting unit 3); and a controller (circuit component 8, Fig. 2) electrically coupled to the telemetric imager (detecting unit 3L and 3R); wherein the controller determines the stylus position based on computation between a first set of images of the stylus tip from a first direction and a second direction generated with the light source on and a second set of images of the stylus tip from the first and second directions generated with the light source off when the stylus tip is in a stylus entry region (see Fig. 8 and col. 10, lines 21-44, col. 11, lines 11-35).

Ogawa does not explicitly disclose the telemetric imager is a single telemetric imager. However, Omura teaches a coordinate inputting/detecting device similar to Ogawa. Fig. 8 of Omura teaches the optical units 63a and 63b can be positioned in a single position detecting part 62 (single telemetric imager). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the telemetric imager of Ogawa to be a single telemetric imager as taught by Omura thus the operability of the apparatus can be enhanced and coordinates can be precisely detected.

Ogawa disclose the controller determines the stylus position based on computation between the first set of images and the second set of images of the stylus tip (S5 in Fig. 8), but not based on comparison between the first set of images and the second set of images. However, Hiramatsu teaches a coordinate input system similar to Ogawa. Figs. 10 and 11 of Hiramatsu teaches the system using a CCD camera (4) to generate a first set of images with the light source ON and a second set of images with the light source OFF, the processing circuit (46) comparing the first set of images and second set of images by using subtracter 42 [computing] to get the differential luminance signal and a comparator 44 to get the output signal for determining the stylus position (col. 12, line 27 to col. 13, line 18 for example). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the computation in the controller of Ogawa as modified by Omura to have the feature of comparing the first set of images and the second set of images for determining the stylus position as taught by Hiramatsu thus providing an advantage of improving the signal/noise ratio of the detecting system (col. 3, lines 51-52 of Hiramatsu).

As to claim 2, Ogawa teaches the stylus comprises a pen (2 in Fig. 8).

As to claim 4, Ogawa teaches the stylus 2 has a tip end, when the detecting unit detects the writing tip end touching on the coordinate plane1, which reads on a writing-mode imaging target as claimed.

As to claim 6, Fig. 1 of Ogawa teaches the telemetric imager comprises two optical imaging arrays (3L, 3R).

As to claim 11, Fig. 22 of Ogawa teaches the light emitted from the light source illuminates the stylus tip when the stylus tip is in the stylus entry region.

As to claims 12, 13, Ogawa teaches the light source comprising LED (col. 10, lines 12-13).

As to claim 15, Fig. 23 of Ogawa teaches an optical filter (39) positioned between the telemetric imager and the stylus, and the optical filter preferentially passes light from the stylus tip to the telemetric image.

As to claim 16, Fig. 8 of Omura teaches a communication port (interface circuit 79) connected to the controller to enable communication between the controller and a digital computing device (computer, col. 16, lines 9-21).

As to claim 18, Figs. 2 and 22 of Ogawa teaches the telemetric imager (3) and the controller (8) are contained in a housing. Fig. 22 of Ogawa teaches the light source is positioned near the detecting unit (3).

Claim 20 is a method claim corresponding to the above apparatus claim 1, is rejected for the same reasons as stated above since such method "steps" are clearly read on by the corresponding "means".

As to claim 21, Ogawa teaches the telemetric imager comprises two optical imaging arrays (3L, 3R).

As to claims 23, Fig. 22 of Ogawa teaches illuminating the stylus tip with a light source (31) when the stylus tip is in the stylus entry region.

As to claim 29, Omura teaches sending the determined stylus position to a digital computing device (computer, see col. 16, lines 19-21).

As to claim 30, Ogawa teaches interpreting the determined stylus position (col. 1, lines 21-23).

As to claims 26, 27, 35, 36, Ogawa teaches determining angular information of the stylus (angle or rotation of the stylus) when the stylus tip is in the entry region (col. 7, lines 27-32).

As to claim 38, Omura teaches sending the determined stylus position to a digital computing device (computer, see col. 16, lines 19-21).

As to claim 39, Omura teaches interpreting the determined stylus position (col. 1, lines 21-23).

5. Claims 3, 8-10, 28 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa, Omura and Hiramatsu as applied to claims 1, 20 and 31 above, and further in view of Tsuji (US 2001/0020936).

Ogawa as modified by Omura and Hiramatsu does not disclose a writable medium in the stylus entry region comprising a sheet of paper. However, Figs. 1 and 2 of Tsuji teaches a stylus entry region comprising a sheet of paper (20) as a writable medium. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the writable medium of Ogawa as modified by Omura and Hiramatsu to have a sheet of paper as taught by Tsuji since this allows the user to draw or write on the writable medium for inputting handwritten characters or diagrams to a computer or a printer such that both an electronic copy and a hardcopy is available as a record to the user at the same time.

6. Claims 5, 25 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa, Omura and Hiramatsu as applied to claims 1, 20, and 31 above, and further in view of Brown et al (US. PAT. NO. 4,430,526 hereinafter Brown).

Ogawa as modified by Omura and Hiramatsu does not disclose the stylus includes an erasing mode image target near an erasing end of the stylus. However, Figs. 2 and 3 of Brown teaches a stylus (30) has a writing mode near writing end of a stylus (32), an erasing mode near an erasing end of the stylus (31). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the stylus of Ogawa as modified by Omura and Hiramatsu to have an erasing mode as taught by Brown so as to provide pointing device which is capable of performing writing and erasing operation.

7. Claims 7, 22 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa, Omura and Hiramatsu as applied to claims 1 and 20 above, and further in view of Inabata ((US. PAT. NO. 5,245,175).

Ogawa as modified by Omura and Hiramatsu does not disclose using one optical imaging array to generate the image of the stylus tip from the first and second directions. However, Fig. 1 of Inabata teaches using one optical imaging device (CCD 7) to generate images of from the first and second directions (col. 1, lines 37-49). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ogawa as modified by Omura and Hiramatsu to use one optical imaging CCD as taught by Inabata so as to provide a low cost optical imaging device.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa, Omura and Hiramatsu as applied to claim 1 above, and further in view of McDermott et al (US. PAT. NO. 5,635,683 hereinafter McDermott).

Omura teaches a communication port connected between the controller and a digital computing device (5). Ogawa as modified by Omura and Hiramatsu does not explicitly disclose the communication port is one of a wired port or a wireless port. However, McDermott teaches a controller (processor 18 in Fig. 1) connected to a digital computing device (host computer 16) via a wire or wireless link (e.g. col. 9, lines 48-51). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Omura as modified by Ogawa to use a wire or wireless communication link for connecting the controller and the computing device so as to readily transmit information from the controller to the computing device.

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa, Omura and Hiramatsu as applied to claim 1 above, and further in view of Yoshida et al (US. PAT. NO. 5,401,917 hereinafter Yoshida).

Ogawa as modified by Omura and Hiramatsu does not disclose a stylus holder formed within the housing and receives the stylus for stylus storage. However, Fig. 1 of Yoshida teaches a housing of pen input device having a stylus holder (3) formed within the housing and receives the stylus (5) for stylus storage. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Ogawa as modified by Omura and Hiramatsu to have a stylus holder as taught by Yoshida so as to allow stylus to be easily

Art Unit: 2629

inserted and extracted thereto the therefrom and the stylus being held in a stable manner when inserted inside (col. 1, lines 13-15 of Yoshida).

Response to Arguments

10. Applicant's arguments with respect to claims 1-13, 15-23, 25-32, 34-40 have been considered but are moot in view of the new ground(s) of rejection.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Regina Liang/
Primary Examiner, Art Unit 2629

/Richard Hjerpe/

Supervisory Patent Examiner, Art Unit 2629

